

Application No. 10/807,402
AMENDMENT dated August 20, 2008
Reply to Office Action of March 20, 2008

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A method of making a filled dough product, comprising:

providing an extrusion head including

- an outer horn having an outer horn passageway extending a first axial length ~~between~~ from an outer horn inlet to an outer horn outlet, wherein the outer horn passageway tapers inwardly in cross sectional shape ~~from the outer horn inlet to the outer horn outlet~~ along the entire first axial length, and

- an inner horn located co-axially inside and circumferentially separated from the outer horn to define the outer horn passageway therebetween, wherein the inner horn has an inner horn passageway extending a second axial length ~~between~~ from an inner horn inlet to an inner horn outlet wherein the inner horn passageway has a substantially constant cross sectional diameter along the entire second axial length, and wherein the inner horn outlet is located axially within the outer horn passageway;

conducting dough through the outer horn passageway to the outer horn outlet and an edible filling material through the inner horn passageway to the inner horn outlet, wherein dough discharged from the outer horn outlet enrobes edible filling material discharged from the inner horn outlet to form an extruded rope.

Claim 2 (Canceled)

Claim 3 (Canceled)

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Claim 4 (Original): The method of claim 1, wherein the outer horn has an L/D ratio value, measured as the ratio of the outer horn length (L)/outer horn average internal diameter (D), of less than 5.0.

Claim 5 (Original): The method of claim 1, wherein the outer horn has an L/D ratio value, measured as the ratio of the outer horn length (L)/outer horn average internal diameter(D), in the range of 3.0 to 4.0.

Claim 6 (Canceled)

Claim 7 (Original): The method of claim 1, wherein the outer horn and inner horn are both arranged substantially horizontally relative to force of gravity.

Claim 8 (Original): The method of claim 1, wherein the dough material comprises a protein content of ~~at least~~ greater than about 11%.

Claim 9 (Currently Amended): The method of claim 1, wherein the edible filling ~~material~~ material comprises an extrudable material selected from a processed meat product, a dairy product, an egg product, a seafood product, a processed legume product, a processed vegetable product, a processed fruit product, individually or in any combination thereof.

Claim 10 (Original): The method of claim 1, wherein the filling material comprises cream cheese.

Claim 11 (Currently Amended): A method for making a filled bagel product,
comprising:

providing:

- an extrusion head comprising:

- an outer horn having an outer horn passageway extending a first axial length ~~between~~ from an outer horn inlet to an outer horn outlet, wherein the outer horn passageway tapers inwardly in cross sectional shape ~~from the outer horn inlet to the outer horn outlet~~ along the entire first axial length,

- an inner horn located co-axially inside and circumferentially separated from the outer horn to define the outer horn passageway therebetween, wherein the inner horn has an inner horn passageway extending a second axial length ~~between~~ from an inner horn inlet to an inner horn outlet wherein the inner horn passageway has a substantially constant cross sectional diameter along the entire second axial length, wherein the inner horn outlet is located axially within the outer horn passageway, and wherein the extrusion head provides reduced dough shear compared to extrusion heads comprising at least one of a non-tapered portion of an outer horn passageway and an inner horn outlet outside of an outer horn passageway,

- a bagel dough supply container, and a dough transport mechanism between the bagel dough supply container and the outer horn,

- an edible filling material supply container, and a filling feeding mechanism between the filling material supply container and the inner horn,

conducting a bagel dough through the outer horn passageway to the outer horn outlet and an edible filling material through the inner horn passageway to the inner horn outlet, wherein the bagel dough discharged from the outer horn outlet enrobes edible filling material discharged from the inner horn outlet to form an extruded rope;

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cutting the extruded rope into at least one filled bagel dough segment having a first free end and second free end; and

connecting the first and second free ends together to form a continuous ring-shaped food product.

Claim 12 (Original): The method of claim 11, further including the steps of:

proofing the ring-shaped food product effective to activate a yeast to raise the bagel dough through fermentation;

cooking the bagel dough of the ring-shaped food product after proofing by a surface heating procedure selected from steaming, boiling, or a combination thereof.

Claim 13 (Original): The method of claim 12, wherein the cooking comprising boiling.

Claim 14 (Currently Amended): The method of claim 11, the conducting of the bagel dough comprises drawing a vacuum pressure on the bagel dough supply container of a magnitude effective for (i) entraining bagel dough into the dough transport mechanism such that bagel dough discharged from the outer horn discharge outlet enrobes filling material discharged from the inner horn outlet to form an extruded rope, and (ii) causing intermittent pauses in the discharge of bagel dough from the outer horn outlet.

Claims 15-18 (Canceled)

Claim 19 (Currently Amended): The method of claim 11, wherein the outer horn has an L/D ratio value, measured as the ratio of the outer horn length (L)/outer horn average internal diameter (D), ~~in the range of 3.0 to 4.0. D ratio value, measured as the ratio of the outer horn length (L)/outer horn average internal diameter (D),~~ of less than 5.0.

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Claim 20 (Original): The method of claim 11, wherein the outer horn has an L/D ratio value, measured as the ratio of the outer horn length (L)/outer horn average internal diameter (D), in the range of 3.0 to 4.0.

Claim 21 (Original): The method of claim 11, wherein the dough transport mechanism and the filling feeding mechanism each comprise a twin-screw conveyor.

Claim 22 (Canceled)

Claim 23 (Currently Amended): The method of claim 11, wherein the outer horn and inner horn are both [[15]] arranged substantially horizontally relative to force of gravity.

Claim 24 (Original): The method of claim 11, wherein the bagel dough material comprises a protein content of ~~at least~~ greater than about 11%.

Claim 25 (Original): The method of claim 11, wherein the edible filling material comprises an extrudable material selected from a processed meat product, a dairy product, an egg product, a seafood product, a processed legume product, a processed vegetable product, a processed fruit product, individually or in any combination thereof.

Claim 26 (Original): The method of claim 11, wherein the filling material comprises cream cheese.

Claim 27 (Original): The method of claim 11, wherein the filling material comprises an extrudable food material selected from cheese, egg product, and meat, individually or in a combination thereof.

Claim 28 (Withdrawn): An extrusion head useful for making filled food products, comprising:

an outer horn having an outer horn passageway extending a first axial length between an outer horn inlet adapted to receive a coating food to an outer horn outlet adapted to discharge the coating food, wherein the outer horn passageway tapers inwardly in cross sectional shape from the outer horn inlet to the outer horn outlet; and

an inner horn located co-axially inside and circumferentially separated from the outer horn to define the outer horn passageway therebetween, wherein the inner lo horn has an inner horn passageway extending a second axial length between an inner horn inlet adapted to receive filling material to an inner horn outlet adapted to discharge filling material, wherein the second passageway of the second horn has a substantially constant cross sectional diameter from the inner horn inlet to the inner horn outlet, and wherein the inner horn outlet is located axially within the outer horn passageway, and wherein the outer horn and inner horn are both arranged substantially horizontally relative to force of gravity.

Claim 29 (Withdrawn): An extruder for making filled food products, comprising:
an extrusion head comprising:

- an outer horn having an outer horn passageway extending a first axial length between an outer horn inlet adapted to receive a coating food to an outer horn outlet adapted to discharge the coating food, wherein the outer horn passageway tapers inwardly in cross sectional shape from the outer horn inlet to the outer horn outlet,

- an inner horn located co-axially inside and circumferentially separated from the outer horn to define the outer horn passageway therebetween, wherein the inner horn has an inner horn passageway extending a second axial length between an inner horn inlet adapted to receive filling material to an inner horn outlet adapted to discharge filling material, wherein the second passageway of the second horn has a substantially constant cross sectional diameter from the inner horn inlet to the inner horn outlet, and wherein the inner horn outlet

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is located axially within the outer horn passageway, and wherein the outer horn and inner horn are both arranged substantially horizontally relative to force of gravity;

 a dough supply container, and a dough transport mechanism between the dough supply container and the outer horn; and

 an edible filling material supply container, and a filling feed mechanism operable to conduct filling material from the edible filling material supply container to the inner horn.